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ABSTRACT

This study examined the responses of 3,915 Oshkosh, Wisconsin students (in grades 5 through 12) to the National Cancer Institute's (NCI) standard form of common questions for school-based interventions. Also, a pilot questionnaire of knowledge, beliefs, and attitudes concerning and predicting tobacco use was administered. NCI findings indicated an important tobacco use problem beginning approximately in the 6th grade and peaking at the 11th, regardless of respondents' gender. Chewing tobacco and snuff use are significant among males, but not among females. Pilot questionnaire findings indicated an important tobacco use problem among both male and female Oshkosh students paralleling NCI results. The research concludes that introduction of tobacco prevention materials into the health education curriculum should start in the middle schools because children start smoking in the sixth grade. (JAM)

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TOBACCO USE BEHAVIOR IN GRADES 5-12[1]

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Abstract

In March, 1987, the National Cancer Institute's standard form of common questions for school-based interventions was administered in grades 5-12 of the Oshkosh Public Schools to start a multi-year research program. Also, a pilot questionnaire of knowledge, beliefs, and attitudes concerning tobacco use was administered to a sample of grades 6, 7, 8, 10, and 12. Results indicate an important tobacco use problem beginning approximately sixth grade and peaking at eleventh. Smoking is a significant problem among both males and females. Chewing tobacco and snuff use are significant among males (peaking at about 20%), but not among females (never over 1%). The pilot questionnaire was found useful for measuring attitudes and knowledge and predicting tobacco usage. Survey results are being used in health curricula construction and to measure the impact of curricular and other environmental changes on tobacco use behavior. Implications of results for curriculum and teaching are discussed.

Research Problem

Significance of the Project

Standard estimates of total U.S. yearly deaths attributable to tobacco use range from a low of about 300,000 (USDHHS, 1986a, p. ix) to a high of over 500,000 (Ravenholt, 1984) with many estimates between 300,000 and 500,000 (USDHEW, 1979; USDHHS, 1980, 1981, 1982, 1983, 1984, 1985). Smoking is "the chief preventable cause of death and disability in our society" (USDHHS, 1984, p. iii). Using chewing tobacco and snuff cause additional cancer deaths plus other oral (such as dental) and digestive system health problems (USDHHS, 1986b).

This project, in line with Surgeon General Everett Koop's goal of a "smoke-free young America by the year 2000," (1986) is aimed toward the goal of producing zero tobacco use in adolescents graduating from the

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Oshkosh Public Schools. The first step toward that goal was to establish a database on current tobacco use that would be valuable for curriculum building in the area of tobacco use prevention programs. The ultimate goal is to preserve the students' most valuable commodity: their lives.

Nature of the Project

To demonstrate that prevention can reduce death and disease caused from tobacco use, one must first assess the level of use. It has already been well-documented that tobacco use typically begins during grades 5-12. Evans, Henderson, Hill, and Raines (1979, p. 76) report that in the 1970's, four to five percent of 12 to 14 year olds were smoking weekly or more often. By going to fifth grade, this study extended down to age ten and obtained preonset data from almost all students that would later start smoking or other tobacco use.

This initial project was a survey of tobacco use by all students in grades 5-12 in the OASD. Research in the Oshkosh Public Schools was chosen because of convenience to the investigator and willingness of the Oshkosh Area School District (OASD) to participate in this research program.

The National Cancer Institute (NCI, 1985, p.37) standard form of common questions for school-based interventions was used to gather the data during the week of March 16-20, 1987 (See Appendix A).

Relevant Literature

Trends in Adolescent Smoking and Other Tobacco Use

Currently about 14% of 12-17 year olds smoke. (NIDA figures in Werner, 1986). The average daily consumption of cigarettes by adolescent daily smokers aged 12-17 is about 16 cigarettes per day. This average rises to about 22 cigarettes per day for surviving smokers between the ages of 26 and 74. However, it should be noted that these figures obtained by self-report survey of adults tend to underestimate total U.S. cigarette consumption by about one-third. Figures available from the U.S. Department of Agriculture indicate that well over 600 billion cigarettes are consumed each year in the United States (Johnson, 1984, pp. 18, 19, 64, 107) whereas the above figures obtained by survey produce an estimate of only 415 billion cigarettes consumed per year. This means that the true average must be somewhat over 30 cigarettes per day rather than the self-reported average of 22.

During the 1970's there was a slight drop in the percentage of adolescents who smoke. In the 1980 Surgeon General's report (USDHHS, 1980, pp. 33-39), the percent of persons ages 17-18 that smoked in 1979 was 26 percent for females and 19 percent for males. This is a dramatic

reversal from 1968 when the percent was 19 percent for females and 30 percent for males.

More recently there has been a drop from 29% of high school seniors reporting smoking daily in 1977 to 19% reporting smoking daily in 1986 (Johnston, O'Malley, & Bachman, 1987, p. 50). These figures come from the annual "Monitoring the Future" national survey the University of Michigan has been conducting since 1975.

In Wisconsin, Jones (1985) reports the use of smokeless tobacco as ranging from 3% of males in seventh grade to 15% of males in twelfth grade with virtually no female adolescents using smokeless tobacco. McDermott and Marty (1986), in a midwestern college student survey, found 14% of males and less than 1% of females using smokeless tobacco. These results agree well with results of a national study reported in the 1986 Surgeon General's report (USDHHS, 1986a, p. 1-10,) that show about 16% of male adolescents and 2% of female adolescents have used smokeless tobacco in the past year. This same report shows that U.S. smokeless tobacco consumption has gone up about 40% since 1970. The American Medical Association's consensus group on smokeless tobacco indicates that smokeless tobacco use among teenage boys is steadily increasing (1986), but does not give figures for this increase.

Factors Related to Smoking Initiation

Smoking initiation is related to many intercorrelated factors. Among the most predictive factors are personality (Kellam, Brown, and Fleming, 1982; Gilchrist, Snow, Lodish, and Schinke, 1985; Salomon, Stein, Eisenberg, and Klein, 1984; Tucker, 1985), smoking role models (Speilberger, Jacobs, Crane, and Russell, 1983; Sunseri, Alberti, Kent, and Vickers, 1983; Duryea and Martin, 1981; Alexander, et al, 1983; Chen and Thompson, 1980; McCaul, et al, 1982; O'Connel, et al, 1981; Pederson, et al. 1981; Sunseri, et al, 1983), and age (USDHHS, 1980, pp 29-32; Alexander, et al, 1983). Money and miscellaneous other factors also are related to smoking (USDHHS, 1980; Alexander, et al, 1983; O'Connel, et al, 1981; Clarke, MacPherson, and Holmes, 1982; Urberg and Robbins, 1984; Allegrante, O'Rourke, and Tuncalp, 1977).

Aggressiveness in males predicts later smoking behavior as early as first grade (Kellam, et al, 1982). Adolescent non-smokers are more assertive, use more facts in decision making and have greater follow-through (Gilchrist, et al, 1985). Smokers are more truant and have less ability to resist peer pressure (Salomon, et al, 1984). High school males intending to smoke have few positive personality characteristics whereas other males are more relaxed, self-controlled, moralistic, intelligent, self-confident, and emotionally stable (Tucker, 1985). Adolescents intending to smoke are more likely than others to have an external locus of control (Clark, et al, 1982).

The smoking behavior of parents and siblings strongly predicts an adolescent's smoking behavior (Spielberger, et al, 1983; Sunseri, et al,

1982). The same is true of friends' smoking behavior (Alexander, et al, 1983; Chen and Thompson, 1980; McCaul, et al, 1982: O'Connel, et al, 1981; Pederson, et al, 1981; Sunseri, et al, 1983).

Money available often limits adolescent smoking (Alexander, et al, 1983; O'Connel, et al, 1981). Some things that predict nonsmoking are disapproval of cigarette advertising (Alexander, et al, 1983), having had a friend or relative die of lung cancer, and knowledge of the Surgeon General's report (Allegrant, et al, 1977).

Initiation of cigarette smoking in adolescents is an example of an over-determined behavior (it has many causes). There are many correlated variables that predict the initiation of smoking. Thus, the elimination of any one factor or subset of factors will not prevent smoking initiation. On the other hand, comprehensive programs that incorporate the best of various programs that have been tried in the past will likely have the greatest effects in prevention of the initiation of smoking.

Prevention Programs

Current studies involve using the school as the site for preventing the initiation of smoking or for obtaining the cessation of smoking. McAlister, et al (1979, 1980), assigned two 1978 seventh-grade cohorts from similar suburban California cities to either an experimental peer-led prevention program or to a control group. A follow-up at thirty-three months after the start of the study (with less than 2% of both groups smoking at the start), showed 5% of the experimental group smoking and 15% of the control group (Telch, et al, 1982). This indicates 67% less initiation of smoking in the experimental group than in the control group. Vartianen, et al (1983), report that the North Karelia Youth Project in Finland modeled after McAlister, et al (1980) also produced significant differences with experimental groups showing significantly less smoking.

Flay, et al (1985), found the Waterloo Smoking Prevention Program involving 22 schools to be significantly effective in reducing smoking (59% reduction) among students classified as being at high-risk of becoming smokers.

Botvin, et al (1980, 1982, 1983, 1984), pioneered using life-skills training incorporating the problem of smoking as only part of their program. They found dramatic reductions in smoking onset in two different experimental groups (85% and 58% as compared to control groups).

In summary, prevention programs research shows many promising results which can be used to build prevention programs. When such programs' effects are measured longitudinally by establishing and using databases, they provide a sound basis for continued curriculum building in this vital area of student health.

Methodology

Research Hypotheses

The first research hypothesis was that there is a significant amount of tobacco use by Oshkosh students in grades 5-12. The second research hypothesis that is in process of study is that tobacco use will change across time as a result of curricular and societal changes. This ongoing study is providing a database against which to measure the impact of these changes.

Objectives of the Proposed Research

This project was envisioned as a multi-year project in which a database on tobacco use by students would be accumulated and used in developing curriculum in the OASD. The first year's objective was database building. The second year's objectives were database continuation plus using the database to make decisions about OASD health curriculum prevention programs. The second year's data are being tabulated and analyzed as this goes to press.

Validity of Self-Reports

A variety of studies have come to the conclusion that self-reports are sufficiently accurate to justify basing research on self-reports (Akers, Massey, Clark, and Lauer, 1983; Bauman, Koch, and Bryan, 1982; Lauer, et al, 1982) rather than utilizing other measures (Farquhar, et al, 1977; Pechacek, et al, 1984; Bauman, et al, 1982; and Evans, Hansen, and Mittelmark, 1977). For the present study, self-reports were used because they are quick and effective.

Project Activities: Population and Sample

The initial project for the 1986-87 school year was a survey of tobacco use by all students in grades 5-12 in the Oshkosh Area School District. On the assumption that the Oshkosh public school system is not radically different from other U.S. public school systems for cities of 10,000 to 100,000 population, results should be generalizable to other schools.

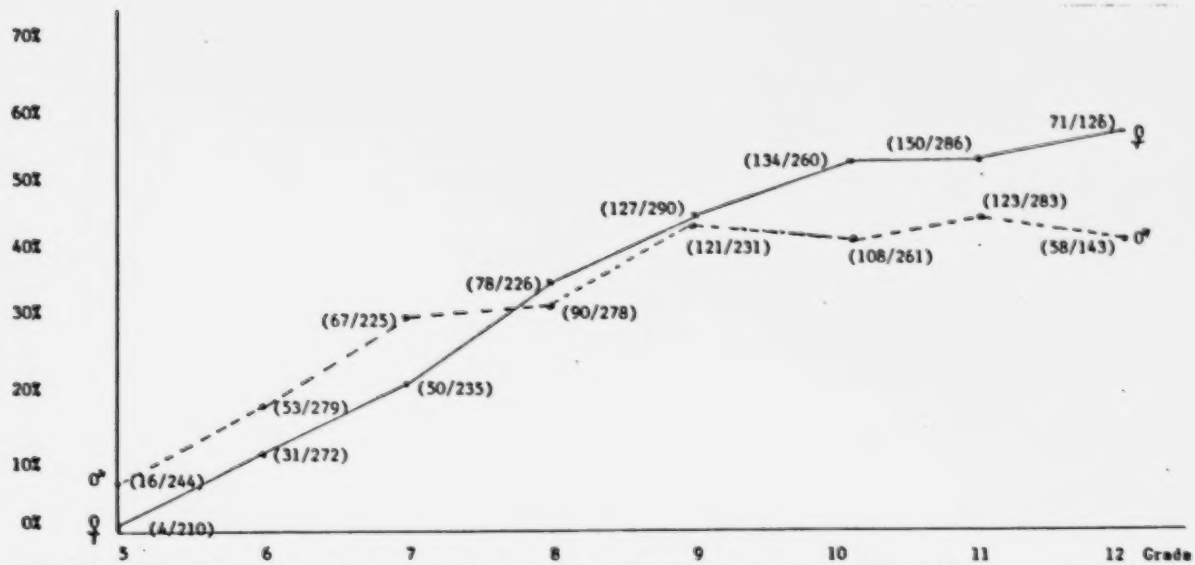
Project Results

There were 3,943 surveys returned. Of 3943 returns, 28 were eliminated from analysis. All except one of the 28 contained obviously spurious data. The one did not answer questions except to scrawl "I hate it, I've never tried." An example of an obviously spurious survey return would be one with "Alien Life Form" listed where the three initials should be and responses such as, "have never smoked" to NCI question two on current smoking pattern and "smoked 299 cigarettes in

the last 7 days" for NCI question three (See Appendix A). Although there are probably some additional spurious returns, research reviewed for this project indicated that the total of such surveys is likely to be less than 2%. The consistency of results for all grades except grade 12 supports the conclusion that the present data are as valid as that presented in previous literature.

The lower than expected tobacco use in grade 12 may be the result of the fact that about half of the twelfth grade classrooms were not surveyed. It could also be partly the result of tobacco users being more prone to drop out of school.

Main Results by Grade Level



Bracketed numbers are actual numbers of respondents, e.g. 4 of 210 fifth grade female respondents.

Figure 1. Males and females by grade level reporting having smoked more than one cigarette in their lifetimes.

Figure 1 shows the number and percent at each grade level reporting smoking more than once in their lifetimes. Figure 1 most vividly shows the rapid increase in experimentation that occurs in middle school. Females eventually do more experimenting with smoking than males. The amount of experimenting levels off in high school with about 42% of the males and about 53% of the females in grades 10, 11, and 12 reporting smoking two or more times in their lifetimes. Males try smoking earlier, but females eventually are more likely to have tried smoking.

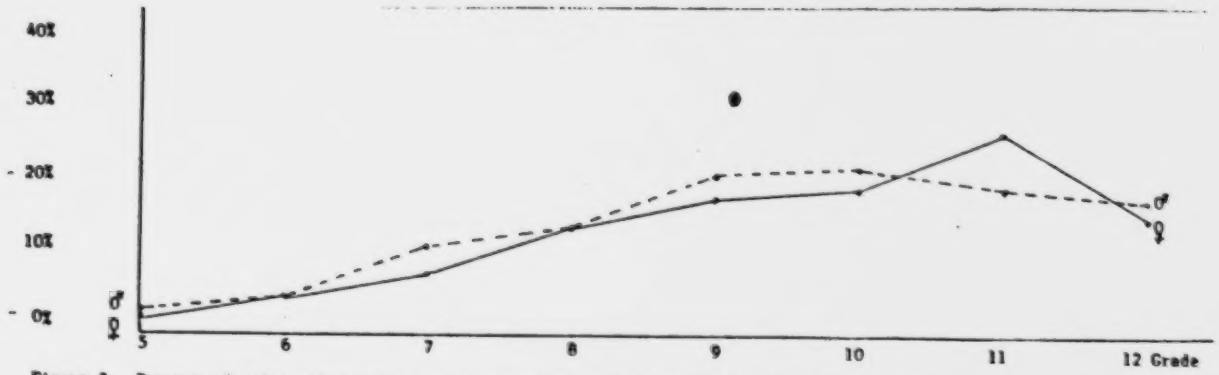


Figure 2. Percent of males and females reporting smoking more often than once per week in the past week (question 3).

Figure 2 shows a rapid regular increase in the amount of students reporting smoking more than once in the past week from sixth grade through ninth grade. It also shows that male and female smoking are close to equivalent through tenth grade. Males are smoking more in the middle school and early high school and females catch up by eleventh grade. The only grades where more than 10% of the male or of the female students smoke a half pack a day or more are grade ten where 13% of the males report smoking that much and grade eleven where 12% of the females report smoking that much.

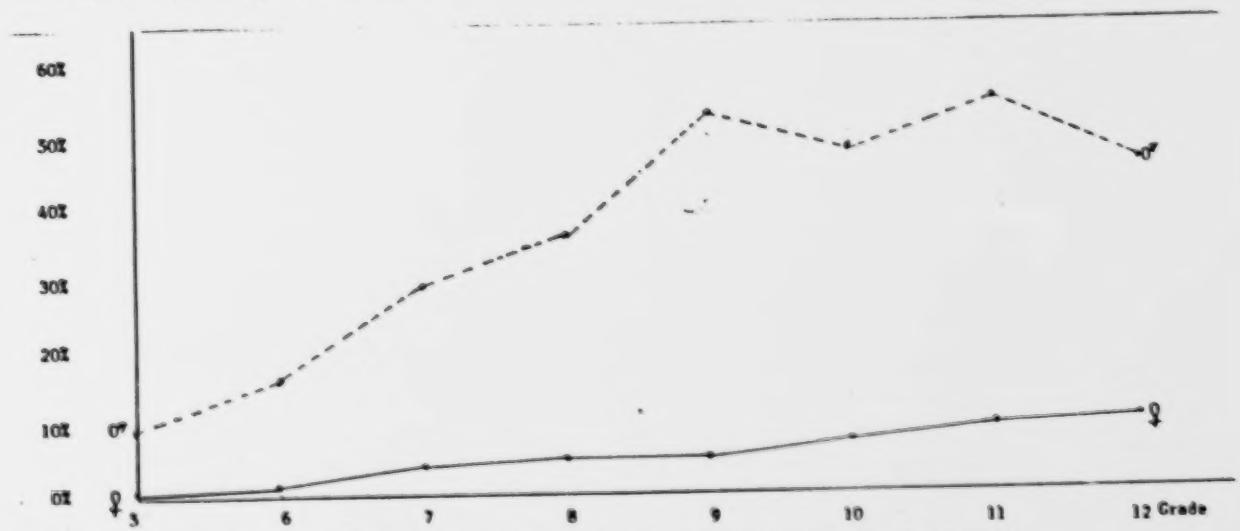


Figure 3. Percent trying snuff or chewing tobacco more than one time in their lifetimes (question 5).

Figure 3 clearly shows a strong male/female difference in trying snuff or chewing tobacco. It also shows that much beginning experimentation is at the middle school level. Although figure 3 shows that 10% of females in grade 12 have tried snuff or chewing tobacco more than once, the female rate of reported usage in the past week (question six) never exceeded one percent at any grade level. On the other hand,

males experiment in middle school and about 19% reported using snuff or chewing tobacco once or more a week in high school. When use of snuff or chewing tobacco is taken into account and added to smoking, males use more tobacco products than females at all grade levels as is shown in figure 4.

Fifth Grade Results

The choice of grade five as the lowest grade to survey apparently was appropriate. Only one of the 457 students responding at the fifth grade level (including six fourth graders in a mixed classroom) reported smoking one cigarette in the last 24 hours.

On the other hand some smoking experimentation has been done by a 16 of 451 fifth graders. Three females at this level (1.5%) had tried smoking one or more times in the past twelve months. Similarly, thirteen fifth grade males (5%) had tried smoking in the past twelve months. When asked about smoking in the last 30 days, seven fifth graders said they had smoked. Six of the seven reported less than one cigarette per day and one reported one to five cigarettes per day. From these data, it was concluded that the incidence of smoking behavior at the fifth grade level is insignificant. As a result, the fifth grade will not be surveyed in future years.

Overall Use

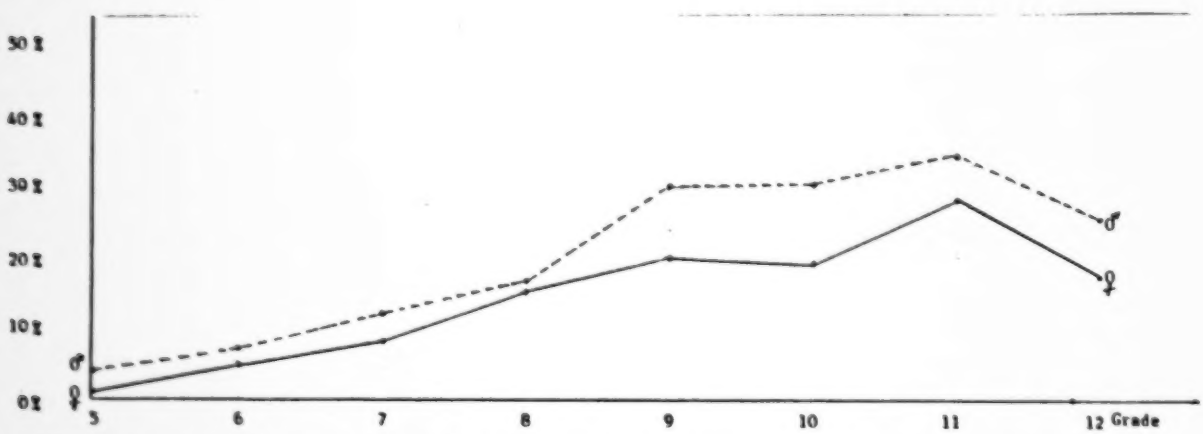


Figure 4. Percent of each sex in grades eight through twelve using tobacco once or more in the past seven days (questions 3 and 6 combined).

Since overall use of tobacco includes both smoking and using chewing tobacco or snuff, a combined analysis was done of question three and six by grade level. Figure 4 shows the percent of students of each sex at each of grades five through twelve reporting smoking one cigarette or more or chewing tobacco or using snuff once or more in the seven days before the survey. Although these results show that there is an important tobacco use problem at the high school level in Oshkosh,

they also show that the vast majority of students are nonusers. For example, even in grade 11 where tobacco use appears to peak, 66 percent of the males and 72 percent of the females report no tobacco use in the preceding seven days. Probably the most significant aspect of Figure 4 is that it shows that overall male use of tobacco products is consistently higher than female use even though at the upper high school levels females more often than males report being current smokers.

Tobacco Questionnaire Pilot Program

Along with the much larger project of gathering data using the NCI form (See Appendix A), a pilot form on student knowledge, beliefs, and attitudes concerning tobacco use was administered to a sample of 238 students in grades 6, 7, 8, 10, and 12 (See Appendix B).

The purposes of the tobacco questionnaire were to 1) obtain measures that predict whether or not students will use tobacco products, 2) measure current attitudes of students toward use of tobacco products, and 3) measure current knowledge of students about the major health damage effects of tobacco products.

The questionnaire was constructed to reflect items that have been most strongly related to the above purposes as shown by the studies cited in the section on "Factors Related to Smoking Initiation." It was piloted during March 16-20, 1987.

Tobacco Questionnaire Pilot Results

1. There was significant variation from item to item indicating that each item validly asked a different question from other items.

2. About 16% say they will smoke in the future, about 8% say they will chew, and about 4% say they will use snuff.

3. Although from 94-98% think it is not nice when others smoke, use snuff, or chew (questions 4, 5, and 6), from 17% to 32% think these same behaviors are socially "OK" (questions 10,11, and 12).

4. About 17% do not see smoking as unhealthy, 8% do not see using snuff as unhealthy, and 20% do not see chewing as unhealthy(questions 7, 8, and 9).

5. Questions 13, 14, 15, and 16 measure both attitude and knowledge. Students seem most knowledgeable about lung cancer and heart disease caused by smoking with 92% and 91% respectively, agreeing that smoking causes these diseases. Only 87% agree that emphysema is caused by

smoking. This may reflect a lack of knowledge of what emphysema is on the part of the 13% responding negatively. Similarly, only 33% strongly agreed with the emphysema item (item 15), but 51% strongly agreed with the smoking causes lung cancer item (item 14). Question 16 represents widespread knowledge that cancers may be caused by chewing tobacco or using snuff (92% agreement), but there is not as much strong agreement for this (45% strong agreement) as there is that smoking causes lung cancer (51% strong agreement).

6. The reported incidence of smoking, chewing tobacco, and using snuff by friends (questions 17, 18, and 19) agrees well with the results of the main tobacco use survey using National Cancer Institute questions.

7. The incidence of parental tobacco use in this sample of 238 students is still high. Of fathers, 40% are indicated as using tobacco. Of mothers, 33% are indicated as using tobacco.

A trial run was made to see whether tobacco use behavior (NCI questionnaire) could be predicted from the Pilot Tobacco Questionnaire. How students responded to item one of the pilot questionnaire ("I will smoke in the future.") was compared to question three (smoking in the last seven days) in the NCI questionnaire. Since the NCI form and the pilot form had been administered separately, the identifiers of initials and birthdate were used to enable a computer crosstabulation on these variables. Results were obtained for 204 students. This was less than 238 students because some surveys had identifier problems: for example, in one classroom the students did not fill in the identifiers on the pilot questionnaire. There was a strong statistically significant relationship (Chi square with 3df = 58.5, $p < .01$) between whether or not a person is currently smoking (NCI question 3) and their predictions of their own future smoking behavior (Pilot Tobacco Questionnaire item 1). Those who are currently smoking generally say they will in the future. Those who are not smoking generally say they will not in the future.

The trial run showed that procedures for measuring these changes should work. As database continuation occurs in future years, it will be necessary to compare files of each student on a year to year basis to report group behavior changes from one year to the next. Some examples of group behavior changes worth studying are how many students start, stop, increase, or decrease smoking behaviors from one year to the next. This enables research on categories such as "adopter," "increased adopter," decreased adopter," etc. mentioned by Shinke and Gilchrist (1983).

Tobacco Use Survey and Pilot Survey Conclusions

The Oshkosh Area School District does have an important tobacco use problem among its middle school and high school students. A valuable database has been gathered against which to measure the effects of future curriculum changes aimed at decreasing student tobacco use.

The Tobacco Questionnaire Pilot Survey form apparently meets the purposes for which it was designed. As shown in the pilot analysis of responses to NCI question three in relation to item one of the Tobacco Questionnaire Pilot Survey, this form can be used to predict whether or not students will use tobacco products. This form can be used to measure current attitudes toward use of tobacco products and to measure current knowledge of students about the major health damage effects of tobacco products. It is being used for these purposes in the second year of the project.

Implications of Results for Curriculum Development

Since tobacco use is beginning most dramatically at the middle school level, the curriculum prior to the middle school can be effectively used to introduce ideas in the health curriculum concerning tobacco use. However, intervention and prevention programs are most likely to have important effects if they are active at the grade levels where students are beginning experimenting. It would seem important to cover tobacco use at each of grades six, seven, and eight with different activities at each level.

Teachers need to see tobacco use prevention efforts incorporated thoroughly into the curriculum. In addition, there should be workshops, preservice, and inservice courses preparing teachers to help combat beginning tobacco use. Help in this area can come from the vast array of resources mentioned earlier in this paper.

Some resources and procedures for tobacco use prevention may come from unexpected sources. For example, Gilchrist and Schinke (1985) found that their prevention techniques worked best with middle class white children in middle school. Schinke and Gilchrist (1986) more recently suggested incorporating social workers into prevention programs. This may help schools in prevention programs with lower class children where there has been the least success to date.

Ultimately, the greatest resources in tobacco use prevention are the teachers, students, and parents. Intervention programs should be keyed to student and teacher characteristics with additional involvement of the student's family. The present research shows that sex of the student is a very important characteristic to consider when building prevention programs.

For both males and females, intervention programs need to be focused on prevention of starting smoking at all grade levels. However,

since there are some strong sex differences in tobacco use behavior, it makes sense to have a differentiated curriculum in the areas where tobacco use behaviors and reasons for tobacco use are different in the two sexes. For example, chewing tobacco and snuff seem to be being substituted at the high school level for smoking by some males and since this is almost an exclusively male phenomenon, it might be effective to aim most interventions in the area of chewing tobacco and snuff toward males at both the middle school and high school levels. On the other hand, females do more trying of smoking at the high school level and at grade eleven are smoking more than males (as shown in figures 1 and 2). Therefore special emphasis should be made at both the middle and high school levels to prevent female smoking behavior.

One thing to do is to relate intervention programs for females to the reasons they give for smoking. In the author's college classes a frequently given reason for smoking by females is control of weight. The health curriculum for middle and high school females should contain many activities aimed at convincing them that it is very harmful to smoke in an effort to control weight. In addition the curriculum should include materials and activities aimed at convincing them that it is likely to harm their unborn babies during pregnancy.

Both sexes need to be convinced of the grave health consequences of smoking. They need to be convinced of its addictive nature. To do this, many educationally significant activities could be done. Some examples are:

1. library searches for research results
2. debating and proposing legislation in this area
3. writing to legislators
4. looking at tax benefits of the tobacco industry
5. looking at how students' own families have been affected by tobacco use
6. studying the nature and effects of advertising
7. having high school students talk to middle school students about handling pressures to smoke
8. interviewing middle-aged smokers on why they started and on how easy it is to quit, etc.
9. bringing in representatives of the American Cancer Society,the American Lung Association and the American Heart Association to present their excellent materials and activities

10. using traditional activities of class discussion, bulletin boards, skits, artwork, etc., to enliven the curriculum.

As one example of what can be done at the middle school level, consider the students of Monroe Junior High School in Monroe, Wisconsin, who made history (and came to this author's attention) during the 1987-88 school year. After five years of work, they saw legislation proposed by them written into Wisconsin law. On April 20, 1988, Wisconsin governor Tommy Thompson signed a bill into law effective July 1, 1989, prohibiting selling of or giving tobacco to minors. The law establishes penalties for violation.

From this example it is obvious that middle school students can do something about our tobacco use problem. Middle school is the place for students to work on this problem.

Summary

This project's ultimate goal is zero tobacco use among adolescents graduating from the Oshkosh Public Schools. The first step toward this goal was to measure levels of current tobacco use. The NCI standard form of common questions was administered to grades 5-12. An additional questionnaire was piloted and is now being used to measure attitudes and knowledge about tobacco use and to predict future tobacco use.

The first year's results indicate a strong need to incorporate more tobacco use prevention into the curriculum. The best resources for such prevention are students, teachers, and parents.

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Give your initials: _____ (1st) _____ (Mid) _____ (Last) When were you born? _____ (Mo) _____ (Day) _____ (Year)

What grade are you in? _____

1. Have you ever smoked a cigarette?
   - ☐ (a) No, never.
   - ☐ (b) Yes, but only once.
   - ☐ (c) Yes, more than once.

2. How much do you currently smoke?
   - ☐ (a) I have never smoked.
   - ☐ (b) Not at all in the last 12 months.
   - ☐ (c) A few times in the last 12 months.
   - ☐ (d) Usually once a month.
   - ☐ (e) A few times each month.
   - ☐ (f) Usually once a week.
   - ☐ (g) A few times each week.
   - ☐ (h) A few times most days.
   - ☐ (i) About half a pack each day.
   - ☐ (j) A pack or more each day.

3. How many cigarettes have you smoked in the last 7 days? Circle or Check.

100's	10's	1's
0	0	0
1	1	1
2	2	2
	3	3
	4	4
	5	5
	6	6
	7	7
	8	8
	9	9

or ☐ None

4. How many cigarettes have you smoked in the last 24 hours?

10's	1's
0	0
1	1
2	2
3	3
4	4
5	5
6	6
7	7
8	8
9	9

or ☐ None

5. How many times have you tried chewing tobacco or snuff in your whole life?
   - ☐ (a) Never.
   - ☐ (b) 1 time.
   - ☐ (c) 2 to 5 times.
   - ☐ (d) 6 to 10 times.
   - ☐ (e) 11 to 20 times.
   - ☐ (f) More than 20 times.

6. How many times have you used chewing tobacco or snuff in the last 7 days?

100's	10's	1's
0	0	0
1	1	1
2	2	2
	3	3
	4	4
	5	5
	6	6
	7	7
	8	8
	9	9

or ☐ None

7. How frequently have you smoked cigarettes during the past 30 days?
   - ☐ (a) Not at all.
   - ☐ (b) Less than one cigarette per day.
   - ☐ (c) One to five cigarettes per day.
   - ☐ (d) About one half pack per day.
   - ☐ (e) About one pack per day.
   - ☐ (f) About one and one half packs per day.
   - ☐ (g) Two packs or more per day.

8. Have you smoked a cigarette, even a puff, during the past seven days?

   ☐ Yes ☐ No

9. Which are you?

   ☐ Female ☐ Male

APPENDIX B

Give your initials: _____ _____ _____ When were you born? _____ _____ _____
1st Mid Last Mo Day Year

What grade are you in? _____

TOBACCO QUESTIONNAIRE

SA = Strongly Agree
A = Agree
D = Disagree
SD = Strongly Disagree

		SA	A	D	SD
1.	I will smoke in the future.	____	____	____	____
2.	I will use snuff in the future.	____	____	____	____
3.	I will chew tobacco in the future.	____	____	____	____
4.	It's nice when others smoke.	____	____	____	____
5.	It's nice when others use snuff.	____	____	____	____
6.	It's nice when others chew tobacco.	____	____	____	____
7.	It is unhealthy to smoke.	____	____	____	____
8.	It is unhealthy to use snuff.	____	____	____	____
9.	It is unhealthy to chew tobacco.	____	____	____	____
10.	Smoking is socially OK.	____	____	____	____
11.	Using snuff is socially OK.	____	____	____	____
12.	Chewing tobacco is socially OK.	____	____	____	____
13.	Many cases of heart disease are caused by smoking.	____	____	____	____
14.	Most lung cancer cases are caused by smoking.	____	____	____	____
15.	Most emphysema cases (unable to breathe) are caused by smoking.	____	____	____	____
16.	Some cancers are caused by chewing tobacco or using snuff.	____	____	____	____

		ALL	MOST	HALF	SOME	NONE
17.	Of my friends, this many smoke:	____	____	____	____	____
18.	Of my friends, this many use snuff:	____	____	____	____	____
19.	Of my friends, this many chew tobacco:	____	____	____	____	____

20. Does your father smoke?____; use snuff?____; chew tobacco?____; do none of these?____

21. Does your mother smoke?____; use snuff?____; chew tobacco?____; do none of these?____

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